

December 7, 1999

Mr. Mark Koenig
Quaker Oats Company
2002 South East Street
Indianapolis, Indiana 46225

Re: Registered Construction and Operation Status,
R-097-11460-00056

Dear Mr. Koenig:

The application from Quaker Oats Company, received on October 13, 1999, has been reviewed. Based on the data submitted and the new provisions in IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.1-2 and 326 IAC 2-5.5, it has been determined that the following boilers and printing operation facilities, to be located at 2002 South East Street, Indianapolis, Indiana, is classified as registered. This Registration shall expire December 7, 2004.

- (a) Two (2) Cleaver-Brooks steam boilers, maximum operating capacity 16.75 mmBtu/hr each, identified as emission units 1 and 2, both venting through stack S-1; and
- (b) One (1) printing operation used to print codes on bottles and boxes.

The following conditions shall be applicable:

1. Pursuant to IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in IAPCB Regulation 5-1-2 and 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.
2. Pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 6-2-2(a) (Particulate Emission Limitations for sources of Indirect Heating), particulate matter (PM) emissions from each 16.75 mmBtu/hr boiler shall be limited to 0.4 pounds per mmBtu heat input.
3. The natural gas-fired Cleaver Brooks Boilers, emission units 1 and 2 are subject to the New Source Performance Standard for Small Industrial - Commercial - Institutional Steam Generator Units, 40 CFR Part 60.40c, Subpart Dc (312 IAC 12), because construction commenced after June 9, 1989.
 - (a) Pursuant to 40 CFR Part 60.48c (a) (Reporting and recordkeeping requirements), the owner or operator of the affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this rule.
 - (b) Pursuant to 40 CFR Part 60.48c (g), the owner or operator of this facility shall record and maintain records of the amounts of fuel (Natural Gas) combusted on a monthly basis and maintain these records for a period of two years following the date of such record.

No emission or opacity standard exists when combusting natural gas.

4. Pursuant to The Code of Indianapolis and Marion County Chapter 511, this registration will be subject to annual operating fees.
5. Pursuant to IAPCB Regulation 2-6 (Annual emission statement rule) and state regulation 326 IAC 2-6(Emission Reporting), an authorized individual shall provide an annual emission statement to the Environmental Resources Management Division and the Office of Air Management at the addresses listed below no later than April 15 of each year.
**Technical Support and Modeling
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**
and
**Environmental Resources Management Division
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097**
6. Pursuant to IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.1-2(f)(3), an authorized individual shall provide an annual notice to the Environmental Resources Management Division and the Office of Air Management that the source is in operation and in compliance with this registration at the addresses listed below, in the format attached, no later than April 15 of each year.
**Compliance Data Section
Office of Air Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015**
and
**Environmental Resources Management Division
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097**

This registration is issued to this source in lieu of an operating permit renewal. The source may operate according to IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.5.

The Permittee shall submit an application to renew this Registration prior to August 3, 2004. An application or notification shall be submitted in accordance with IAPCB Regulation 2(permits) and state regulation 326 IAC 2 to the Office of Air Management (OAM) and the Air Quality Management Section (AQMS) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Robert Holm, Ph.D
Administrator

TMH

cc: Matt Mosier, Permits/Compliance Program Manager
Cheryl Carlson, Enforcement Program Manager
Rick Martin, Air Planning Manager
Mindy Hahn, IDEM
Gail McGarrity, IDEM

Registration Annual Notification

This form should be used to comply with the notification requirements under **326 IAC 2-5.1-2(f)(3) or 326 IAC 2-5.5-4(a)(3)**

Company Name:
Address:
City:
Authorized individual:
Phone #:
Registration #:

I hereby certify that Quaker Oats is still in operation and is in compliance with the requirements of Registration 097-11460-00056.

Name (typed):
Title:
Signature:
Date:

**Indianapolis Environmental Resources Management Division
Air Quality Management Section**

and

**Indiana Department of Environmental Management
Office of Air Management**

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name: Quaker Oats Company
Source Location: 2002 South East Street, Indianapolis, Indiana
County: Marion
Registration No.: 097-11460-00056
Permit Reviewer: Tena Hopkins

The Environmental Resources Management Division (ERMD) has reviewed an application for Quaker Oats Company relating to the operation of two (2) boilers and a printing operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) Two (2) Cleaver-Brooks steam boilers, maximum operating capacity 16.75 mmBtu/hr each, identified as emission units 1 and 2, both venting through stack S-1; and
- (b) One (1) printing operation used to print codes on bottles and boxes.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) OP 930056, issued on November 4, 1993.

All conditions from previous approval were incorporated into this permit.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S-1	2 boilers	42	2.0	6900	475

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 13, 1999, with additional information received on October 20, 1999.

Emission Calculations

See Appendix A , of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	0.3
PM-10	1.1
SO ₂	0.1
VOC	2.0
CO	12.3
NOx	14.7
Methanol	0.37
Methyl ethyl ketone	0.46
Glycol Ethers	0.14

Fugitive Emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1998 ERMD and OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.3
PM-10	1.1
SO ₂	0.1
VOC	2.0
CO	12.3
NO _x	14.7
Methanol	0.37
Methyl ethyl ketone	0.46
Glycol Ethers	0.14

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marion County has been classified as attainment or unclassifiable for PM-10, SO₂, NO₂, Ozone, CO, and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.3
PM10	1.1
SO ₂	0.1
VOC	2.0
CO	12.3
NO _x	14.7
Comb. HAPs	0.97

- (a) This source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the operation permit renewal application submitted by the company.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit R097-11460-00056, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This status is based on the air approval issued to the source.

Federal Rule Applicability

1. The natural gas-fired Cleaver Brooks Boilers, emission units 1 and 2 are subject to the New Source Performance Standard for Small Industrial - Commercial - Institutional Steam Generator Units, 40 CFR Part 60.40c, Subpart Dc (312 IAC 12), because construction commenced after June 9, 1989.
 - (a) Pursuant to 40 CFR Part 60.48c (a) (Reporting and recordkeeping requirements), the owner or operator of the affected facility shall submit notification of the date of construction or reconstruction and actual startup, as provided by §60.7 of this rule.
 - (b) Pursuant to 40 CFR Part 60.48c (g), the owner or operator of this facility shall record and maintain records of the amounts of fuel (Natural Gas) combusted on a monthly basis and maintain these records for a period of two years following the date of such record.

No emission or opacity standard exists when combusting natural gas.

2. The printing operation is not subject to the New Source Performance Standards for the Graphic Arts Industry: Publication Rotogravure Printing, 40 CFR Part 60.430, Subpart

QQ (312 IAC 12), because it is not a publication Rotogravure printing operation.

3. The printing operation is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Printing and Publishing Industry, 40 CFR Part 63.820, Subpart KK (326 IAC 12), because it is not a major source for HAPs.

State and Local Rule Applicability - Entire Source

3. Pursuant to The Code of Indianapolis and Marion County Chapter 511, this registration will be subject to annual operating fees.
2. Pursuant to IAPCB Regulation 2-6 (Annual emission statement rule) and state regulation 326 IAC 2-6(Emission Reporting), an authorized individual shall provide an annual emission statement to the Environmental Resources Management Division and the Office of Air Management, no later than April 15 of each year.
3. Pursuant to IAPCB Regulation 2 (Permits) and state regulation 326 IAC 2-5.1-2(f)(3), an authorized individual shall provide an annual notice to the Environmental Resources Management Division and the Office of Air Management that the source is in operation and in compliance with this registration no later than April 15 of each year.
4. IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1 (Temporary Alternative Opacity Limitations)
 - (a) Pursuant to IAPCB Regulation 5-1-2 (Smoke and Other Visible Emissions) and 326 IAC 5-1-2 (Temporary Alternative Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:
 - (i) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (ii) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State and Local Rule Applicability - Individual Facilities

1. IAPCB Regulation 2 (Permits) and 326 IAC 6-2-4(a) (Particulate Emission Limitations for sources of Indirect Heating)
 - (a) Pursuant to IAPCB Regulation 2 (Permits) and 326 IAC 6-2-4(a) (Particulate Emission Limitations for sources of Indirect Heating), particulate matter (PM) emissions from the 16.75 million BTU/hour boilers shall be limited to 0.4 pounds per million BTU heat input.
2. IAPCB Regulation 2 (Permits) and 326 IAC 8-1-6 (General provisions relating to VOC rules: general reduction requirements for new facilities)
 - (a) This rule does not apply due to the potential VOC emissions being below twenty-five (25) tons per year.

3. IAPCB Regulation 2 (Permits) and 326 IAC 8-5-5 (Miscellaneous operations: graphic arts operations)
 - (a) This rule does not apply due to the potential VOC emissions being below twenty-five (25) tons per year.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

This new operation will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

See attached spreadsheets for detailed air toxic calculations.

Conclusion

The operation of Quaker Oats Company shall be subject to the conditions of the attached proposed Registration R-097-11460-00056.

Comb. Emissions
2 Cleaver-Brooks @ 16.75 mmBtu/hr each

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Page 1 of 3 TSD App A

Small Industrial Boiler

Company Name: Quaker Oats Company
Address City IN Zip: 2002 South East St., Indpls., 46225
R: 097-11460-00056
Reviewer: Tena Hopkins
Date: 10/20/99

Heat Input Capacity
 MMBtu/hr

Potential Throughput
 MMCF/yr

33.5

293.5

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.3	1.1	0.1	14.7	0.8	12.3

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

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updated 4/99

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Small Industrial Boiler

HAPs Emissions

Company Name: Quaker Oats Company

Address City IN Zip: 2002 S. East St., Indpls., 46225

R: 097-11460-00056

Reviewer: Tena Hopkins

Date: 10/20/99

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HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.081E-04	1.761E-04	1.100E-02	2.641E-01	4.989E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	7.337E-05	1.614E-04	2.054E-04	5.576E-05	3.081E-04

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

VOC Emissions

Inks

Videojet 260 gal/yr
Emission Factor 6.58 lb/gal
 $= (260 \text{ gal/yr})(6.58 \text{ lb VOC/gal}) / (2000 \text{ lb/ton})$
 $= 0.86 \text{ tons VOC/yr}$

Marsh 438 gal/yr
Emission Factor 0.675 lb VOC/gal
 $= (438 \text{ gal/yr})(0.675 \text{ lb VOC/gal}) / (2000 \text{ lb/ton})$
 $= 0.15 \text{ tons VOC/yr}$

Line Cleaner 200 gal/yr
Emission Factor 1.84 lb VOC/gal
 $= (200 \text{ gal/yr})(1.84 \text{ lb VOC/gal}) / (2000 \text{ lb/ton})$
 $= 0.19 \text{ lb VOC/yr}$

TOTAL VOCs from printing = 1.2 ton/yr

HAP Emissions

Videojet & Makeup mixture

51% (MEK)
41% (Methanol)
 $= (260 \text{ gal/yr})(6.91 \text{ lb VOC/gal})(0.51) / (2000 \text{ lb/ton})$
 $= 0.46 \text{ ton/yr}$

$= (260 \text{ gal/yr})(6.91 \text{ lb VOC/gal})(0.41) / (2000 \text{ lb/ton})$
 $= 0.37 \text{ ton/yr}$

Glycol Ethers
 $= 0.14 \text{ ton/yr}$

TOTAL HAP EMISSIONS from printing = 0.83 ton/yr